

FIG. 1

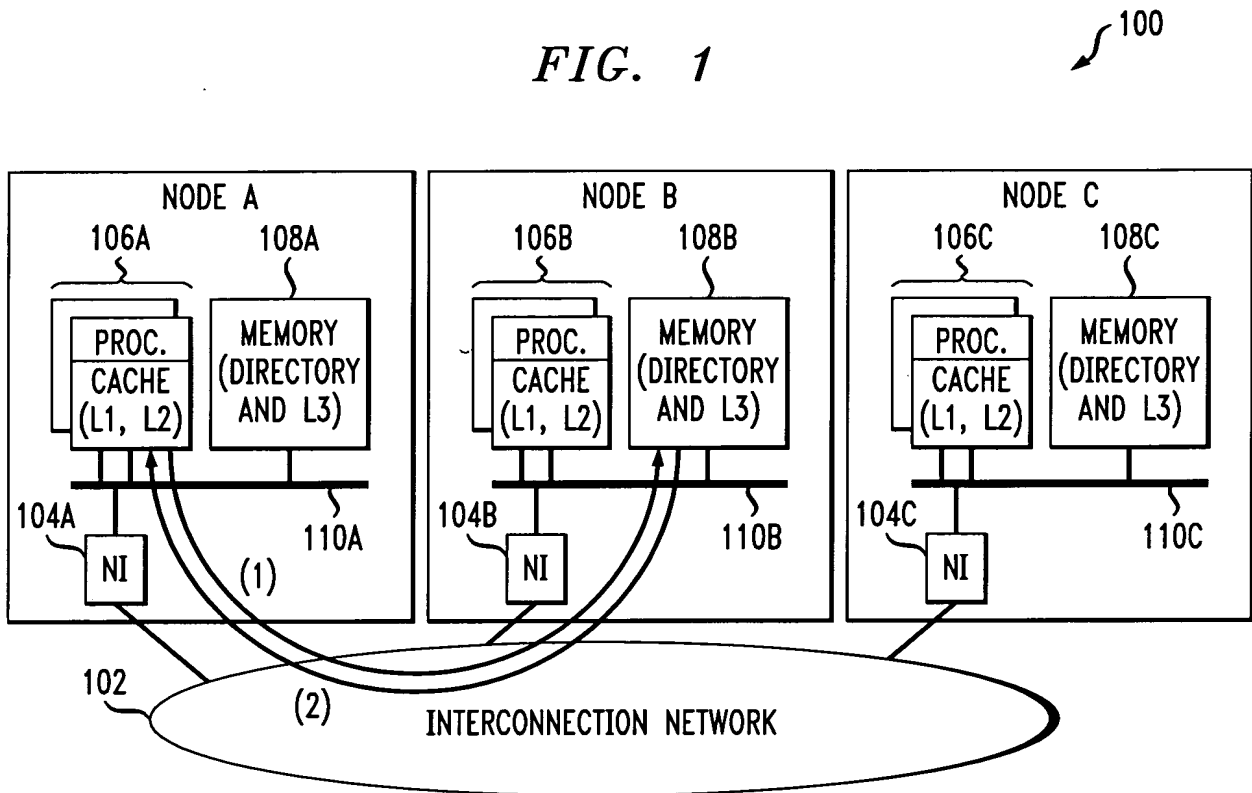


FIG. 2

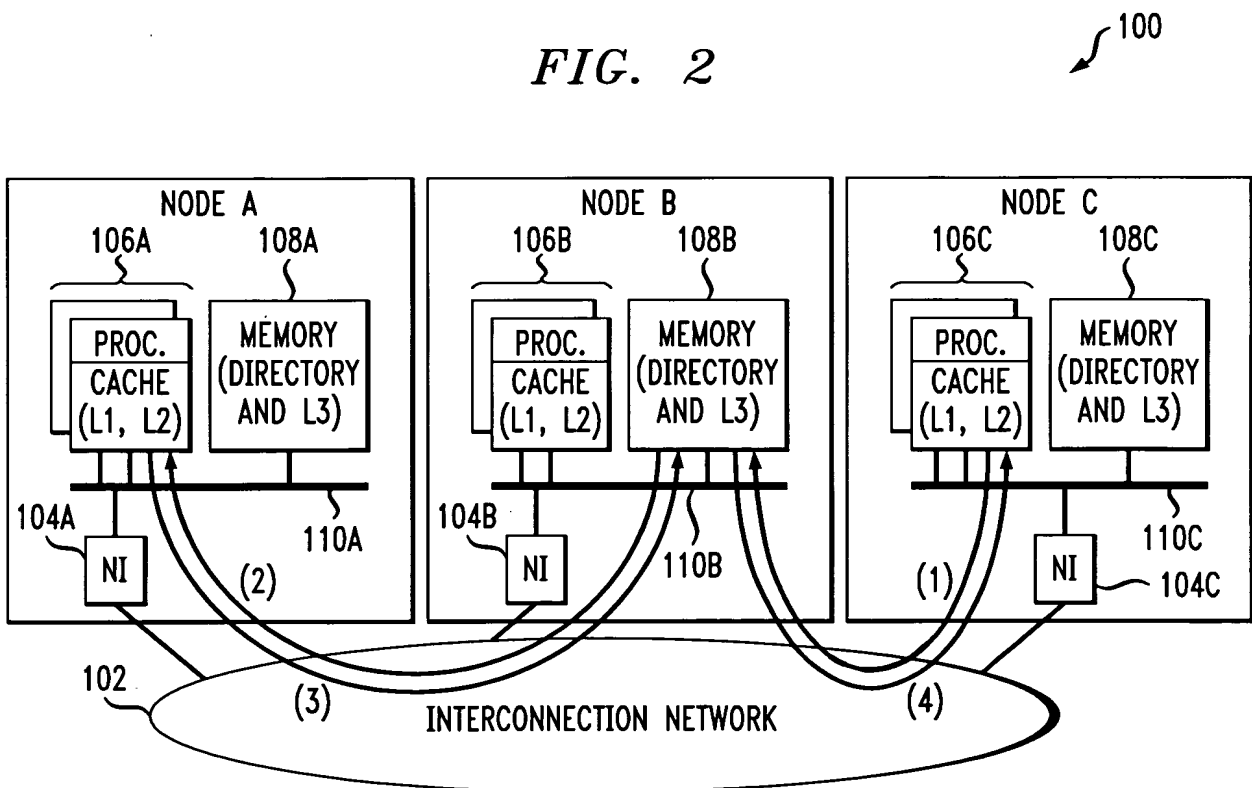


FIG. 3

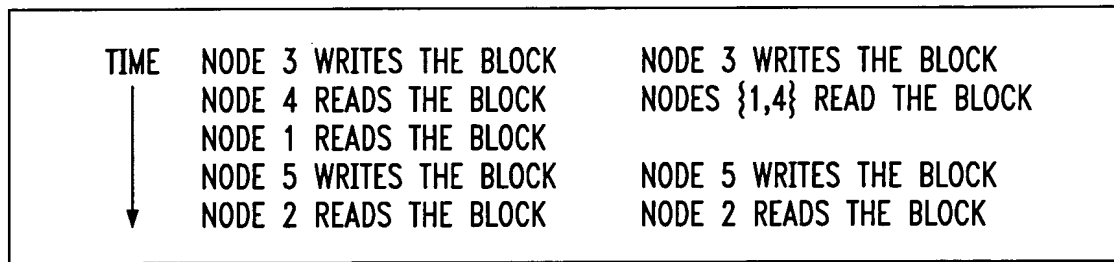
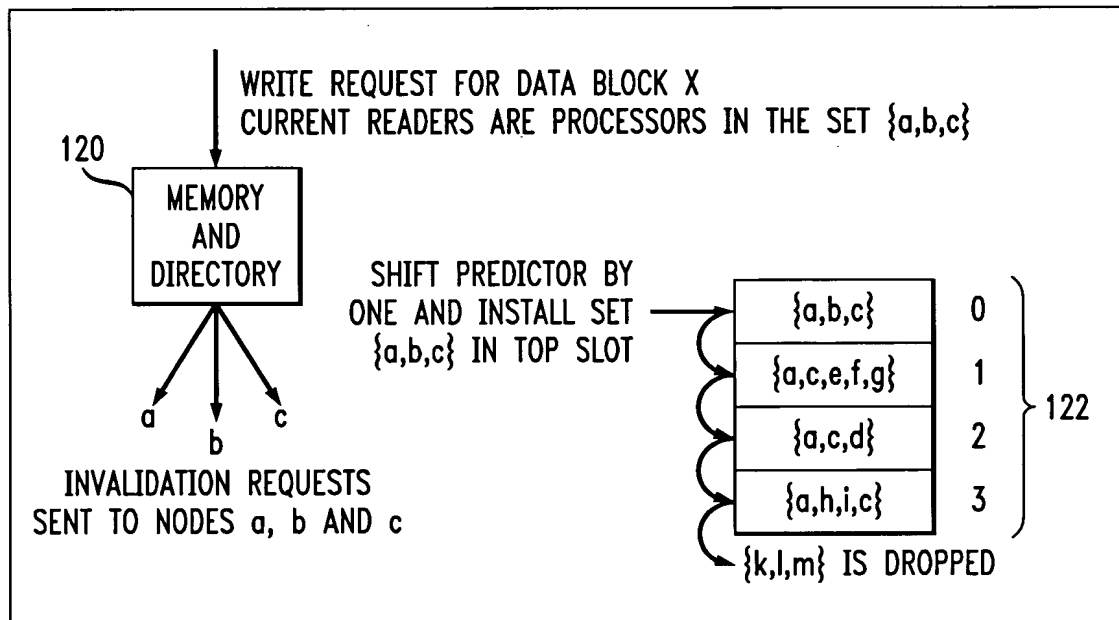
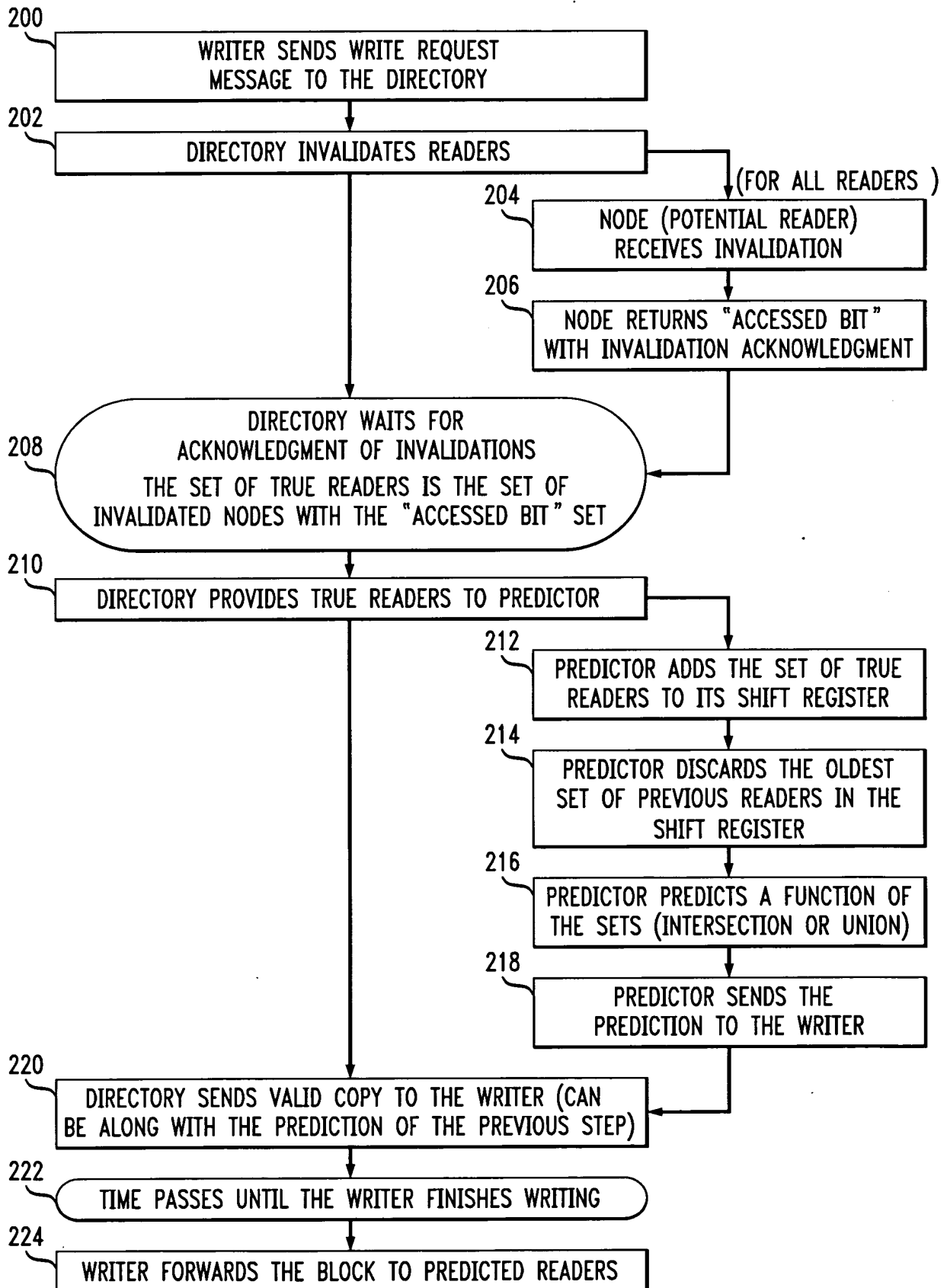


FIG. 4



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FIG. 5



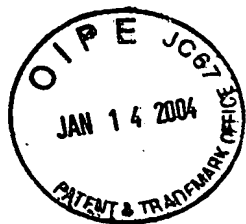
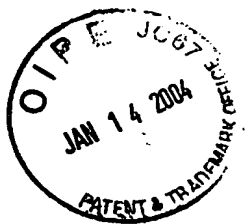
*FIG. 6*

TABLE 1: TOP 10 PVP DIRECT UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
$\text{inter}(\text{pid}+\text{add}_4)^4$	14	0.30	1.00	0.92	0.93
$\text{inter}(\text{pid}+\text{add}_8)^4$	18	0.31	1.00	0.92	0.93
$\text{inter}(\text{pid}+\text{add}_8)^3$	18	0.35	1.00	0.91	0.93
$\text{inter}(\text{pid}+\text{pc}_4+\text{add}_4)^4$	18	0.35	1.00	0.90	0.93
$\text{inter}(\text{pid}+\text{add}_4)^3$	14	0.34	1.00	0.89	0.93
$\text{inter}(\text{pid}+\text{dir}+\text{add}_4)^4$	18	0.32	1.00	0.88	0.93
$\text{inter}(\text{pid}+\text{pc}_4+\text{add}_4)^3$	18	0.37	1.00	0.88	0.93
$\text{inter}(\text{pid})^4$	10	0.29	1.00	0.88	0.92
$\text{inter}(\text{pid}+\text{pc}_4)^4$	14	0.37	0.99	0.87	0.93
$\text{inter}(\text{pid}+\text{pc}_8)^4$	18	0.39	0.99	0.86	0.93

TABLE 2: TOP 10 SPEC. DIRECT UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
$\text{inter}(\text{pc}_4+\text{add}_8)^4$	18	0.12	1.00	0.72	0.91
$\text{inter}(\text{add}_4)^4$	10	0.07	1.00	0.78	0.91
$\text{inter}(\text{pid}+\text{add}_8)^4$	18	0.31	1.00	0.92	0.93
$\text{inter}()^4$	8	0.03	1.00	0.73	0.90
$\text{inter}(\text{add}_8)^4$	14	0.11	1.00	0.70	0.91
$\text{inter}(\text{pc}_4+\text{add}_4)^4$	14	0.08	1.00	0.74	0.91
$\text{inter}(\text{pc}_8+\text{add}_4)^4$	18	0.09	1.00	0.74	0.91
$\text{inter}(\text{pc}_4)^4$	10	0.04	1.00	0.71	0.90
$\text{inter}(\text{pc}_8)^4$	14	0.04	1.00	0.71	0.90
$\text{inter}(\text{pc}_4+\text{dir}+\text{add}_4)^4$	18	0.20	1.00	0.73	0.92



*FIG. 6 (continued)*

TABLE 3: TOP 10 SENS. DIRECT UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
union(dir+add <sub>4</sub> ) <sup>4</sup>	14	0.67	0.86	0.40	0.95
union(dir) <sup>4</sup>	10	0.67	0.85	0.39	0.95
union(pc <sub>4</sub> +dir) <sup>4</sup>	14	0.67	0.85	0.40	0.95
union(pc <sub>4</sub> +dir+add <sub>4</sub> ) <sup>4</sup>	18	0.67	0.85	0.40	0.95
union(dir+add <sub>8</sub> ) <sup>4</sup>	18	0.67	0.87	0.42	0.95
union(pc <sub>8</sub> +dir) <sup>4</sup>	18	0.66	0.86	0.42	0.95
union(pid+add <sub>4</sub> ) <sup>4</sup>	14	0.66	0.87	0.41	0.95
union(pid+add <sub>8</sub> ) <sup>4</sup>	18	0.66	0.87	0.42	0.95
union(add <sub>12</sub> ) <sup>4</sup>	18	0.66	0.86	0.40	0.95
union(add <sub>4</sub> ) <sup>4</sup>	10	0.66	0.80	0.29	0.95

TABLE 4: TOP 10 PVP FORWARDED UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
inter(pid+pc <sub>4</sub> +add <sub>4</sub> ) <sup>4</sup>	18	0.34	1.00	0.92	0.93
inter(pid+add <sub>4</sub> ) <sup>4</sup>	14	0.33	1.00	0.91	0.93
inter(pid+add <sub>8</sub> ) <sup>4</sup>	18	0.33	1.00	0.91	0.93
inter(pid+dir+add <sub>4</sub> ) <sup>4</sup>	18	0.34	1.00	0.91	0.93
inter(pid+add <sub>8</sub> ) <sup>3</sup>	18	0.37	1.00	0.90	0.93
inter(pid+add <sub>4</sub> ) <sup>3</sup>	14	0.36	1.00	0.88	0.93
inter(pid+pc <sub>4</sub> +add <sub>4</sub> ) <sup>3</sup>	18	0.37	1.00	0.88	0.93
inter(pid+dir) <sup>4</sup>	14	0.38	0.99	0.88	0.93
inter(pid+dir+add <sub>4</sub> ) <sup>3</sup>	18	0.37	1.00	0.88	0.93
inter(pid) <sup>4</sup>	10	0.33	1.00	0.87	0.93

*FIG. 6 (continued)*

TABLE 5: TOP 10 SPEC. FORWARDED UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
$\text{inter}(\text{pc}_4 + \text{add}_8)^4$	18	0.11	1.00	0.69	0.91
$\text{inter}(\text{add}_4)^4$	10	0.07	1.00	0.78	0.91
$\text{inter}()^4$	6	0.03	1.00	0.73	0.90
$\text{inter}(\text{add}_8)^4$	14	0.11	1.00	0.70	0.91
$\text{inter}(\text{pid} + \text{add}_8)^4$	18	0.33	1.00	0.91	0.93
$\text{inter}(\text{pc}_8 + \text{add}_4)^4$	18	0.09	1.00	0.74	0.91
$\text{inter}(\text{pc}_4 + \text{add}_4)^4$	14	0.07	1.00	0.69	0.91
$\text{inter}(\text{pid} + \text{pc}_4 + \text{add}_4)^4$	18	0.34	1.00	0.92	0.93
$\text{inter}(\text{pc}_4 + \text{dir} + \text{add}_4)^4$	18	0.18	1.00	0.73	0.91
$\text{inter}(\text{pc}_4)^4$	20	0.03	1.00	0.61	0.90

TABLE 6: TOP 10 SENS. FORWARDED UPDATE					
SCHEME	SIZE	SENS.	SPEC.	PVP	PVN
$\text{union}(\text{dir} + \text{add}_4)^4$	14	0.67	0.86	0.40	0.95
$\text{union}(\text{dir})^4$	10	0.67	0.85	0.39	0.95
$\text{union}(\text{dir} + \text{add}_8)^4$	18	0.67	0.87	0.42	0.95
$\text{union}(\text{pc} + \text{dir} + \text{add}_4)^4$	18	0.66	0.89	0.45	0.95
$\text{union}(\text{add}_{12})^4$	18	0.66	0.86	0.40	0.95
$\text{union}(\text{pid} + \text{dir})^4$	14	0.66	0.89	0.45	0.95
$\text{union}(\text{add}_4)^4$	10	0.66	0.80	0.29	0.95
$\text{union}()^4$	6	0.65	0.77	0.25	0.95
$\text{union}(\text{add}_8)^4$	14	0.65	0.84	0.35	0.95
$\text{union}(\text{pid} + \text{add}_8)^4$	18	0.65	0.88	0.44	0.95